

IN THE CLAIMS

1. (original) An isolated central nervous system cell line comprising an immortal multipotent cell having the potential to differentiate toward a neuronal cell or a glial cell.
2. (original) The cell line according to claim 1 wherein said central nervous system derived cell line is derived from a human central nervous system.
3. (original) An isolated multipotent cell of claim 1.
4. (currently amended) A cell of claim 3 which is characterized by a marker combination selected from the group consisting of TnTx-/ChTx-, TnTx+/ChTx+, TnTx+/ChTx-, TnTx+/ChTx+, A2B5-/TnTx-, A2B5+/TnTx-, A2B5-/TnTx+, A2B5-/ChTx-, A2B5+/ChTx+, A2B5-/ChTx+, A2B5+/ChTx-, TnTx-/ChTx-/nestin+, and TnTx-/ChTx-/nestin-.
5. (original) An isolated cell or tissue derived from the cell line of claim 1.
6. (original) A cell according to claim 3 further comprising a heterologous nucleic acid sequence which encodes a biologically active peptide or protein.
7. (original) A cell according to claim 6, wherein said biologically active peptide or protein is a disease associated peptide or protein.
8. (original) A cell according to claim 6 wherein said biologically active peptide or protein is an enzyme, a trophic factor, a cytokine or a disease associated antigen.
9. (currently amended) A cell according to claim 8 wherein said enzyme is selected from the group consisting of tyrosine hydroxylase, GTPCH1, AADC and VMAT2; said trophic factor is selected from the group consisting of GDNF, VEGF, BDNF, NGF, bFGF, TGF β ,

CNTF, PDGF, BMP, LIF, Neurturin, Persephin, Neublastin, NT4/5, NT3, and Midkine; and said cytokine is selected from the group consisting of IL-10 and IL-6.

10. (original) A cell according to claim 8 wherein said nucleic acid is operably linked to a transcriptional promoter.

11. (original) A cell according to claim 8 wherein said nucleic acid is operably linked to a regulatable promoter system.

12. (original) An isolated or purified cell population comprising a cell of claim 3.

13. (original) The cell population of claim 12, wherein said population is selected from the group consisting of an NG1, NG2, and NG3 populations of cells.

14. (original) A method of identifying a multipotent cell comprising measuring for the presence or absence of a cell-derived binding partner for TnTx, a cell-derived binding partner for ChTx and, optionally, a cell-derived binding partner for an A2B5 antibody in a cell sample which is believed to contain a multipotent cell.

15. (original) The method according to claim 14, wherein said multipotent cell is a fetal central nervous system derived cell.

16. (original) The method of claim 13 wherein said method comprises mixing said sample with at least one factor which specifically binds to at least one of a cell-derived binding partner for TnTx, a cell-derived binding partner for ChTx and a cell-derived binding partner for an A2B5 antibody, under conditions where said at least one factor binds to said cell, and detecting said binding, wherein said binding indicates the presence of said multipotent cell.

17. (original) The method of claim 16 wherein said factor which binds the A2B5 binding partner is an A2B5 antibody or a fragment thereof; said factor which binds a binding partner of ChTx is a ChTx binding partner antibody or a fragment thereof or ChTx or a fragment thereof; and said factor which binds a binding partner of TnTx is a TnTx binding partner antibody or a fragment thereof or TnTx or a fragment thereof.

18. (original) The method of claim 14 further comprising mixing said sample with a factor which specifically bind to human nestin and detecting whether said ligand binds to nestin in said sample.

19. (original) The method of claim 14, wherein said ligand or ligands contain a detectable label and, optionally, said mixing further comprises addition of a further detectable component which binds to said ligand.

20. (original) The method of claim 19 wherein, said detectable label is fluorescent.

21. (original) The method of claim 20, wherein said detection further comprises analyzing said cells with a fluorescence activated cell sorter.

22. (original) A method of purifying a multipotent cell comprising separating a cell identified according to claim 14.

23. (original) A method of enriching a population of cells with said multipotent fetal nervous system derived cells comprising culturing said population in the presence of serum followed by culturing said population in a non-serum containing media.

24. (original) The method of claim 23, wherein said population is passaged in serum containing media through crisis.

25. (original) A method of enriching a population of cells containing multipotent fetal nervous system derived cells with said multipotent cells comprising passaging said population in serum containing media through crisis wherein said population which emerges from crisis is enriched with said multipotent cells.

26. (original) A population of cells produced by the method of claim 23.

27. (original) A population of cells produced by the method of claim 24.

28. (original) A population of cells produced by the method of claim 25.

29. (original) The method of claim 23, wherein said population is derived from the SVG cell line.

30. (original) The method of claim 24, wherein said population is derived from the SVG cell line.

31. (original) The method of claim 25, wherein said population is derived from the SVG cell line.

32. (original) A method of treating a mammal having a neurological syndrome or disease comprising implanting into said mammal a therapeutically effective amount of a composition comprising at least one cell according to claim 4.

33. (original) An isolated cluster of cells comprising a cell of claim 3.

34. (original) A cluster of claim 33 in the form of a neurosphere.